CLAIMS

I claim:

1. An educational toy for exploring technology, comprising:

a frame;

an object suspended from said frame;

a flexible line connecting said object to said frame;

at least one sensor having a mass attached to a spring connected to said object;

whereby said object under the influence of gravity moves freely after being manually energized, and said spring deflects when said object accelerates normally in the direction said spring deflects.

2. The educational toy of claim 1, wherein said object is a cylindrical body of hard rubber material having holes routing and gripping said line.

3. The educational toy of claim 1, wherein said line is one piece clamped to said object and said frame at multiple pivot points forming two triangular-shaped loops spaced apart that suspend said object on four like sections of said line;

whereby said line slides relative to said frame and said object to adjust and align the position of said object.

4. The educational toy of claim 1, wherein said line is connected to said frame at two pivots spaced apart,

whereby said object coasts as a glider type swing with parallel suspension arms when manually energized in the direction of a line between said pivots,

and coasts as a simple swing with one composite suspension arm when energized in a direction perpendicular to said line.

5. The educational toy of claim 1, wherein said suspension line is comprised of an elastic upper section connected to a flexible lower section,

whereby said object falls freely for a period of time after being lifted and dropped,

or pulled down and released,

and said object both swings and bounces freely when energized horizontally.

6. The educational toy of claim 1, wherein an array of said sensors mounted on said object both sense and suppress the motion of said object.

7. The educational toy of claim 1 wherein said spring is a flat plastic beam,
having one end connected to said mass,
and the other end connected to a mounting-adapter block made of hard rubber material that connects to said object.

8. The educational toy of claim 1 wherein said sensor is comprised of said mass connected to one the end of another flexible line,
and the other end connected to the bottom of said object;
whereby gravity acting as a spring tends to restore said sensor to its neutral, vertical position.

9. The educational toy of claim 1 wherein
said frame is a formed metal rod connected to a wood base block,
whereby manually moving the top of said rod back and forth gradually builds up big swinging excursions of said object.

10. A motion-sensor mounting adapter composed of
a block of hard-rubber material connected to said motion sensor,
having a cylindrical hole smaller than a mating post protruding from the test object,
and having a mounting surface contour similar to that of said test object,
whereby when installed, said block grips said post, and residual stresses clamp said mounting surfaces together in intimate contact.